

ORIGINAL

OPEN MEETING



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MEMORANDUM

Arizona Corporation Commission

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AZ CORP COMMISSION
DOCKET CONTROL

TO: THE COMMISSION

FROM: Utilities Division

DATE: August 2, 2011

RE: MORENCI WATER & ELECTRIC COMPANY-APPLICATION FOR APPROVAL OF ITS 2011-2012 ENERGY EFFICIENCY IMPLEMENTATION PLAN AND REQUEST FOR PARTIAL WAIVERS (DOCKET NO. E-01049A-11-0054)

INTRODUCTION

On January 31, 2011, Morenci Water and Electric Company ("Morenci") filed its proposed 2011-2012 Energy Efficiency Implementation Plan ("2011-2012 EE Plan") in compliance with the Arizona Administrative Code ("A.A.C.") Electric Energy Efficiency Standards ("EE Rules") R14-2-2401 through R14-2-2419. In addition to its proposed 2011-2012 EE Plan, Morenci has also requested a partial waiver to exclude: (1) the energy sales to Freeport-McMoRan Copper & Gold Morenci, Inc. ("FMI Morenci") and the Freeport-McMoRan Copper & Gold Safford, Inc. ("FMI Safford") mine sites from the calculation of the Energy Efficiency Standard specified in A.A.C. R14-2-2404; (2) Morenci from the EE Rules for the remaining non-mining load and; (3) Morenci from providing the information required in A.A.C. R14-2-2407 and A.A.C. R14-2-2409 which relate to the information required in a proposed plan and reporting requirements, respectively.

IMPLEMENTATION PLAN

Morenci's 2011-2012 EE Plan consists of four individual programs which were derived from existing programs that have been approved for Arizona Public Service Company ("APS") and Tucson Electric Power Company ("TEP"). The following programs have been included in Morenci's proposed 2011-2012 EE Plan:

- Compact Fluorescent Lamp ("CFL") Program
- Appliance Recycling Program
- Refrigerator Replacement Program
- Education and Outreach Program

CFL PROGRAM

Morenci's proposed CFL Program would promote the installation of energy efficient Energy Star® approved lighting products by customers within its service territory. Morenci would solicit discount pricing from manufacturers and distribute qualifying products though

retailers within its service territory.¹ Morenci states that while its service territory lacks many of the participating retailers within other utilities service territories, there are some retailers that offer lighting products that would qualify for its proposed CFL Program. The proposed CFL Program would be available to all Morenci customers.

Morenci's proposed CFL Program would allow discount pricing to be passed on to the customers through negotiated agreements with lighting manufacturers and retailers. Customers would be referred to participating retailers within Morenci's service territory (i.e. department stores, home improvement stores, lighting equipment stores and supermarkets) to purchase qualifying products that carry the Energy Star® label. CFLs are more expensive than traditional incandescent lamps. However, Morenci's proposed CFL Program would allow participating customers to see savings from reduced power and energy use.

ENERGY SAVINGS AND BUDGET

The table below shows the Demand and Energy savings projected in 2011 and 2012 for the proposed CFL Program.

	2011	2012
Projected Lamp Sales	1,603	1,652
Peak Demand Savings (kW)	49.69	51.21
Energy Savings (kWh)	54,428	56,092

The table below represents the budget for 2011 and 2012 for the proposed CFL Program.

Category	2011	2012
Total Budget	\$3,700	\$3,800
Incentives	\$2,500	\$2,600
Removal Costs	\$1,000	\$1,000
Administration as a % of Total Budget	32.4%	31.6%

APPLIANCE RECYCLING PROGRAM

Morenci's proposed Appliance Recycling Program would provide a means for the removal of an old or second operable refrigerator or freezer. Morenci states that it will use an appliance recycling contractor for appliance pick-up and recycling services. Morenci states that refrigerators and freezers would be recycled in accordance with established U.S. Environmental Protection Agency ("EPA") best practice industry standards. Morenci would provide an

¹ It has been the experience of DSM programs in other areas that benefits are greater when the incentives are paid to the manufacturer, who then provides greater savings to the retailer, who then in turn provides even greater savings to the customer. Morenci's proposed CFL Program structure is the same used by Arizona Public Service, Tucson Electric Power, and UNS Electric for their CFL programs.

incentive to customers who participate in the Program. The proposed Program would be available to all residential and non-residential customers in Morenci's service area.

Morenci would work with an appliance recycling contractor to pick-up old and second refrigerators and freezers on a quarterly basis and deliver the appliances to a facility that would properly dispose of the appliances. In addition, customers who participate in the proposed Appliance Recycling Program would receive a rebate of \$30 for the removal of a refrigerator or freezer.

ENERGY SAVINGS AND BUDGET

The table below shows the Demand and Energy savings projected in 2011 and 2012 for the proposed Appliance Recycling Program.

	2011	2012
Number of Appliances Recycled	20	20
Peak Demand Savings (kW)	3.06	3.06
Energy Savings (kWh)	21,220	21,220

The table below represents the budget for 2011 and 2012 for the proposed Appliance Recycling Program.

Category	2011	2012
Total Budget	\$1,750	\$1,750
Incentives	\$600	\$600
Removal Costs	\$1,000	\$1,000
Administrative Costs	\$150	\$150
Administration as a % of Total Budget	8.6%	8.6%

REFRIGERATOR REPLACEMENT PROGRAM

Morenci's proposed Refrigerator Replacement Program would replace up to 15 older inefficient refrigerators with Energy Star® qualified refrigerators. Morenci would select no more than 15 customers per year to receive an Energy Star® qualified refrigerator unit. All residential customers within Morenci's service area would be eligible to receive an Energy Star® qualified refrigerator unit. According to Morenci, there is no specific criteria a customer must meet in order to be eligible for the proposed Refrigerator Replacement Program. Morenci would purchase 15 Energy Star® qualified refrigerators in bulk ranging in price from \$969-\$1,000 per refrigerator. The older inefficient refrigerators that would be recycled in an environmentally safe manner in accordance with established EPA best practice industry standards. In addition, Morenci would utilize the same appliance recycling contractor that would be used for the Appliance Recycling Program.

Morenci would notify customers that they have been selected by Morenci to replace an older inefficient refrigerator with an Energy Star® qualified refrigerator unit. Morenci states that it would also provide educational materials informing customers of the benefits of Energy Star® appliances.

ENERGY SAVINGS AND BUDGET

The table below shows the Demand and Energy savings projected in 2011 and 2012 for the proposed Refrigerator Replacement Program.

	2011	2012
Number of Appliances Recycled	15	15
Peak Demand Savings (kW)	2.30	2.30
Energy Savings (kWh)	15,915	15,915

The table below shows the budget for 2011 and 2012 for the proposed Refrigerator Replacement Program.

Category	2011	2012
Total Budget	\$16,500	\$16,500
Incentives	\$15,000	\$15,000
Administrative Costs	\$1,500	\$1,500
Administration as a % of Total Budget	9.1%	9.1%

EDUCATION AND OUTREACH PROGRAM

Morenci would provide materials such as bill inserts that would help communicate the benefits of Energy Efficiency. These materials would include steps customers can take to help reduce their energy bills through energy efficiency. In addition, Morenci would provide information on the other energy efficiency programs that would be available to eligible customers. Further, Morenci would provide energy efficiency education for the schools within its service area that would show the importance and value of energy conservation. Morenci would provide energy conservation booklets and study guides for students. No energy savings have been estimated for this program; therefore, Staff did not conduct a cost-benefit analysis of this program. The program budget for 2011 is \$1,050, and the budget for 2012 is also \$1,050.

SAFFORD SULFURIC ACID PLANT

Morenci states that FMI is constructing a Sulfuric Acid Plant (“SAP”) at the FMI Safford mine site. The plant will use steam generated from heating sulfur to produce up to 17 MW of electric generation, of which 12 MW of capacity will be available for mining operations and 5 MW will be used for the SAP operations. At start-up, the SAP will require 4 MW of capacity

but will be self-powering thereafter and will not rely on electricity generated from conventional sources. The SAP could produce an estimated 98,608,000 kWh of excess power annually.

The SAP will convert mined sulfur into sulfuric acid. The sulfur feeds into a furnace which is then oxidized to produce sulfur dioxide. The sulfur dioxide is then transported into a waste heat boiler where it combines with steam and becomes saturated. The saturated steam is transported to a super-heater where it runs the turbine generator that produces electricity. The sulfur dioxide gas then travels through a converter, producing sulfuric acid. The sulfuric acid will then be used for mining operations.

Because the SAP will utilize process heating to produce electricity and requires no additional power from conventional sources besides the power used for start-up, Morenci believes that the SAP qualifies as combined heat and power facility as defined by A.A.C. R14-2-2401.4. Morenci states that it included information regarding the SAP to illustrate the steps FMI is currently taking to maximize efficient use of energy and lessen its dependence on conventional sources of power and that FMI will continue to seek energy efficient measures for its mining operations. Morenci states that no ratepayer funds will be used toward the construction, operation, and maintenance of the SAP.

MARKETING AND PROMOTION

Morenci indicates that in order to promote each proposed program, it would advertise in the local newspaper as well as on local radio regarding the benefits of each program and energy efficiency in general. The advertisements will inform customers of the benefits of CFLs and the cost of operating a second or older less efficient refrigerator or freezer. In addition, Morenci would provide material informing customers about the benefits of recycling an old or second refrigerator or freezer.

COST-BENEFIT ANALYSIS

The Commission's A.A.C. R14-2-2412.B requires the Societal Test be used for determining the cost-effectiveness of a DSM program. Under the Societal Test, in order to be cost-effective, the ratio of benefits to costs must be greater than one. That is, the incremental benefits to society of a program must exceed the incremental costs of having the program in place. The societal costs for a DSM program include the cost of the measure and the cost of implementing the program, excluding rebates. The societal benefits of a DSM program include the avoided demand and energy costs.

Staff's cost-benefit analysis has concluded that Morenci's proposed CFL Program and the proposed Appliance Recycling Program are cost-effective. However, Staff's analysis shows that Morenci's proposed Refrigerator Replacement Program is not cost-effective.

The table below represents the benefit/cost ratio for each of the proposed programs.

Program	Benefit/Cost Ratio
CFL Program	2.64
Appliance Recycling Program	2.28
Refrigerator Replacement Program	0.78
Education and Outreach Program	N/A

The table below shows the total projected environmental benefits from the proposed 2011-2012 EE Plan.

Environmental Savings		
Water (utility savings)	87,605	Gallons
SO _x	1.23	Lbs
NO _x	23.37	Lbs

MEASUREMENT AND EVALUATION

In order to ensure that the programs included in its 2011-2012 EE Plan are meeting the projected goals and objectives, Morenci would collect data to track the performance of each program. This data would include;

- The number and type of CFLs purchased through the CFL Program and provided to participating retailers
- The number and type of CFLs purchased by customers from participating retailers
- The number of refrigerators and freezers recycled through the Appliance Recycling Program
- Specifications of the refrigerators and freezers being recycled through the Appliance Recycling Program
- The number of refrigerators replaced through the Refrigerator Replacement Program
- Specifications of the refrigerators replaced (if feasible) and the specifications of the replacement refrigerators

In addition, Morenci would use the above information to track the demand and energy savings realized for each program (excluding the Outreach and Education Program). Morenci would also track the environmental savings including reduced emissions and water savings.

ENERGY EFFICIENCY ADJUSTOR SURCHARGE

In its application, Morenci included its proposed surcharge rate in order to recover the costs associated with its proposed 2011-2012 EE Plan. In addition, Morenci is proposing to roll-over any funds not used in 2011 into subsequent years. Although Morenci is requesting to exclude the FMI Morenci and FMI Safford mine sites from the standards specified in the EE Rules, Morenci is proposing to assess each mine site a flat monthly charge. Morenci's residential and non-residential customers would be assessed a monthly per-kWh surcharge. Morenci is proposing a \$0.000245 per kWh monthly surcharge for its residential and non-residential customers. In addition, Morenci is proposing a monthly rate of \$650 for the FMI Morenci and FMI Safford mine sites. Morenci states that the per-kWh surcharge collected from its residential and non-residential customers combined with the flat monthly charge from the two mine sites would recover the costs of the proposed 2011-2012 EE Plan.

The table below shows the total proposed budget for 2011 and 2012.

Program	2011 Budget	2012 Budget
CFL Program	\$3,700	\$3,800
Appliance Recycling Program	\$1,750	\$1,750
Refrigerator Replacement Program	\$16,500	\$16,500
Education and Outreach	\$1,050	\$1,050
Total	\$23,000	\$23,100

In its application, Morenci estimates that it would collect approximately \$23,132 annually from its customers for the 2011-2012 EE Plan. The table below shows the monthly and annual impact per customer and customer class including the total estimated to be collected per month and per year.

Customer Class	Number of Customers	Proposed Per kWh Surcharge*	Avg Monthly kWh Per Customer	Avg Monthly Charge per Customer	Estimated Collected (Monthly)**	Annual Charge per Customer	Estimated Collected (Annual)**
Residential	2,104	\$0.000245	595	\$0.15	\$315.60	\$1.80	\$3,787.20
Non-Residential	269	\$0.000245	4,723	\$1.16	\$312.04	\$13.92	\$3,744.48
FMI Morenci & FMI Safford Mine Sites	2	N/A	N/A	\$650	\$1,300	\$7,800	\$15,600
Total	2,375	N/A	N/A	N/A	\$1,927.64	\$7,815.72	\$23,131.68

*The FMI Morenci and FMI Safford mine sites will be assessed a monthly charge rather than a per kWh surcharge.

**Per customer class.

Staff has analyzed Morenci's application in terms of whether there are fair value implications. In Decision No. 54712, issued on October 10, 1985, the Commission determined the fair value of Morenci's (Electric Division) property to be \$876,811. Although Staff considered this information, the proposed 2011-2012 EE Plan would have no significant impact on Morenci's revenue, fair value rate base, or rate of return, because this charge is cost-based and relatively limited in scope.

PARTIAL WAIVER REQUEST

In its application, Morenci is requesting a waiver to exclude energy sales to FMI Morenci and FMI Safford from the calculation of the Energy Efficiency Standard ("EE Standard") required in A.A.C. R14-2-2404. FMI Morenci and FMI Safford are industrial customers involved in mining. Morenci states that more than 98 percent of its load is from the energy sales for the mining operations at FMI Morenci and FMI Safford. In addition, Morenci states that it would not be able to meet the EE Standard if the energy sales to FMI Morenci and FMI Safford were to be included in the calculations.

Further, Morenci is requesting a waiver to exclude the non-mining load energy sales from the EE Standard. Morenci states that there is little growth in its service territory and that new programs that are geared toward new home construction are not viable in its service territory. A majority of Morenci's customers use evaporative cooling and do not have swimming pools. Therefore, programs for Heating, Ventilation, and Air Conditioning ("HVAC") units or pool pumps would be impractical in Morenci's service territory. In addition, the majority of Morenci's customers have natural gas space heating and water heating. All of Morenci's service area receives natural gas service from Southwest Gas Corporation. Because of its unique customer base and the lack of opportunity to offer practical and cost-effective programs, Morenci states that it would most likely not meet the EE Standard. It is unlikely that the portfolio of proposed programs would result in enough reduced consumption to meet the EE Standard. Staff notes that the EE Rules apply to each affected utility classified as Class A according to A.A.C. R14-2-103(A)(3)(q) and without including the energy sales to the FMI Morenci and FMI Safford mines, Morenci would not be considered a Class A utility under A.A.C. R14-2-103(A)(3)(q) and therefore would not be subject to the requirements of A.A.C. R14-2-2404.

Finally, Morenci is requesting a waiver from providing information required in A.A.C. R14-2-2407 and A.A.C. R14-2-2409. Morenci states that its small administrative staff has limited resources and lacks the personnel with the expertise necessary to provide the technical analysis required by A.A.C. R14-2-2407 and A.A.C. R14-2-2409. In order to provide the necessary information Morenci would need to expend significant expense to retain consultants qualified to perform such analyses.

Morenci has been granted approval of a similar waiver request in its 2011 Renewable Energy Standard and Tariff ("REST") Plan (Decision No. 72230). The Commission granted a partial waiver of A.A.C. R14-2-1804 and A.A.C. R14-2-1805 which allowed Morenci to exclude the FMI Morenci and FMI Safford mine sites from the calculation of the REST requirement. In addition, the Commission has previously granted Morenci's request for a partial waiver of the REST requirement in prior Decisions (Decision Nos. 70303, 70952, and 71469).

STAFF ANALYSIS AND RECOMMENDATIONS

Staff believes that Morenci’s proposed 2011-2012 EE Plan will help promote energy efficiency within in its service area. As stated above, Staff has found that Morenci’s proposed CFL Program and proposed Appliance Recycling Program to be cost effective. Based on Staff’s analysis, Morenci’s proposed Refrigerator Replacement Program is not cost effective. Therefore, Staff does not recommend approval of the Refrigerator Recycling Program. However, Staff recommends approval of Morenci’s proposed CFL Program and Appliance Recycling Program.

Staff recommends that the budget for the proposed Refrigerator Replacement Program be incorporated into the budget for the CFL Program. The total budget for the 2011-2012 EE Plan would remain unchanged. In addition, Staff recommends that the CFL Program be modified to include a CFL giveaway component similar to the APS Consumer Products Program approved in Decision No. 72032 as part of the APS 2011 Demand-Side Management Implementation Plan.

Staff recommends that Morenci distribute giveaway CFLs through events, such as fairs, home shows, festivals, community events and trade shows in its service area. In addition, Staff recommends that Morenci distribute giveaway CFLs through local charitable organizations and community groups. Further, Staff recommends that Morenci develop guidelines for participating charitable organizations and community groups to adhere to in order to effectively distribute the giveaway CFLs and track the progress of the giveaway component of the CFL Program.

Staff believes that Morenci should review the guidelines required by APS’ Consumer Products Program (Decision No. 72032) and modify them as necessary to accommodate Morenci’s service area and customer base. Because of Morenci’s unique customer mix and the size of its customer base, Staff believes that an enhanced CFL Program would provide greater opportunity for more of its customers to participate in energy efficiency in a cost-effective manner. The Enhanced CFL Program would continue to be cost-effective.

The table below represents Staff’s proposed modified total budget which removes the Refrigerator Replacement Program and incorporates its proposed budget of \$16,500 into the budget for the CFL Program.

Program	2011 Budget	2012 Budget
CFL Program	\$20,200	\$20,300
Appliance Recycling Program	\$1,750	\$1,750
Education and Outreach	\$1,050	\$1,050
Total	\$23,000	\$23,100

Staff notes that increased federal standards for efficiency are being phased in beginning in 2012. The Energy Independence and Security Act (“EISA”) of 2007 created a standard that requires light bulbs to use 30 percent less energy than current standard bulbs. The standard increases for 100 watt bulbs in 2012, 75 watt bulbs in 2013, and 40 watt bulbs and 60 watt bulbs in 2014. By 2020, under EISA, all bulbs will have to be at least 70 percent more efficient. As

the new standards begin to be phased in, the baseline for measuring must also shift. Therefore, cost-effectiveness of lighting programs will need to be re-evaluated to measure the savings against the baseline.

The increased federal standards will not eliminate the need for CFL programs in the near term. However, the higher standards will raise the baseline for more common wattage bulbs. In future years, it may be necessary for Morenci to re-evaluate its CFL Program, taking into account federal standards, in order to avoid overstatement of the energy savings and cost-effectiveness. Although CFLs have attained an increasing share of the lighting market, they have not become the standard, particularly in the Residential sector. Energy efficiency lighting measures including CFLs continue to have considerable potential for providing energy savings.

Staff recommends that Morenci be granted a waiver to exclude energy sales to FMI Morenci and FMI Safford from the calculation of the EE Standard required in A.A.C. R14-2-2404. In addition, Staff recommends that Morenci be granted a waiver of the EE Standard included in A.A.C. R14-2-2404 for the non-mining energy sales. Staff understands that due to its unique circumstances, it is unlikely that Morenci will meet the required EE Standard. Therefore, Staff recommends that with the 2011-2012 EE Plan, Morenci would be considered in compliance with the EE Standard.

In addition, because Morenci has no prior experience with energy efficiency programs and due to the timing of approval of the proposed plan, Staff believes that Morenci should implement its EE Plan for the 2012-2013 calendar years. Therefore, Morenci would be required to file its next EE Plan no later than June 1, 2014 pursuant to A.A.C. R14-2-2405(A). In addition, Staff believes that Morenci's initial filing of A.A.C. R14-2-2409 should be filed no later than March 1, 2013. For subsequent filings, Morenci would comply with all of the filings dates specified in the EE Rules. Staff recommends Morenci's request for a waiver in providing the information required in A.A.C. R14-2-2407 and A.A.C. R14-2-2409 not be approved. Staff believes that in order to effectively and accurately evaluate the progress of the proposed programs and any future programs approved by the Commission, the information required in A.A.C. R14-2-2407 and A.A.C. R14-2-2409 needs to be filed. Further, Staff recommends that Morenci be required to file with Docket Control, as a compliance matter in this case, a tariff consistent with the terms of the Commission's Decision within 15 days of the effective date of this Decision.



for
Steven M. Olea
Director
Utilities Division

SMO:CLA:lm\SH

ORIGINATOR: Candrea Allen

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BEFORE THE ARIZONA CORPORATION COMMISSION

- GARY PIERCE
Chairman
- BOB STUMP
Commissioner
- SANDRA D. KENNEDY
Commissioner
- PAUL NEWMAN
Commissioner
- BRENDA BURNS
Commissioner

IN THE MATTER OF THE APPLICATION
 OF MORENCI WATER & ELECTRIC
 COMPANY FOR APPROVAL OF ITS 2011-
 2012 ENERGY EFFICIENCY
 IMPLEMENTATION PLAN AND
 REQUEST FOR PARTIAL WAIVERS

DOCKET NO. E-01049A-11-0054
 DECISION NO. _____
ORDER

Open Meeting
 August 16 and 17, 2011
 Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Morenci Water & Electric Company ("Morenci" or "Company") is certificated to provide electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").

INTRODUCTION

2. On January 31, 2011, Morenci filed its proposed 2011-2012 Energy Efficiency Implementation Plan ("2011-2012 EE Plan") in compliance with the Arizona Administrative Code ("A.A.C.") Electric Energy Efficiency Standards ("EE Rules") R14-2-2401 through R14-2-2419.

3. In addition to its proposed 2011-2012 EE Plan, Morenci has also requested a partial waiver to exclude: (1) the energy sales to Freeport-McMoRan Copper & Gold Morenci, Inc. ("FMI Morenci") and the Freeport-McMoRan Copper & Gold Safford, Inc. ("FMI Safford") mine sites from the calculation of the Energy Efficiency Standard specified in A.A.C. R14-2-2404; (2) Morenci from the EE Rules for the remaining non-mining load and; (3) Morenci from providing

1 the information required in A.A.C. R14-2-2407 and A.A.C. R14-2-2409 which relate to the
2 information required in a proposed plan and reporting requirements respectively.

3 IMPLEMENTATION PLAN

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5 derived from existing programs that have been approved for Arizona Public Service Company
6 ("APS") and Tucson Electric Power Company ("TEP"). The following programs have been
7 included in Morenci's proposed 2011-2012 EE Plan:

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- 9 • Appliance Recycling Program
- 10 • Refrigerator Replacement Program
- 11 • Education and Outreach Program

11 CFL PROGRAM

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13 efficient Energy Star® approved lighting products by customers within its service territory.
14 Morenci would solicit discount pricing from manufacturers and distribute qualifying products
15 through retailers within its service territory.¹ Morenci states that while its service territory lacks
16 many of the participating retailers within other utilities service territories, there are some retailers
17 that offer lighting products that would qualify for its proposed CFL Program. The proposed CFL
18 Program would be available to all Morenci customers.

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24 incandescent lamps. However, Morenci's proposed CFL Program would allow participating
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28 the manufacturer, who then provides greater savings to the retailer, who then in turn provides even greater savings to the customer. Morenci's proposed CFL Program structure is the same used by Arizona Public Service, Tucson Electric Power, and UNS Electric for their CFL programs.

1 *ENERGY SAVINGS AND BUDGET*

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17 Protection Agency ("EPA") best practice industry standards. Morenci would provide an incentive
18 to customers who participate in the Program. The proposed Program would be available to all
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21 second refrigerators and freezers on a quarterly basis and deliver the appliances to a facility that
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25 *ENERGY SAVINGS AND BUDGET*

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Category	2011	2012
Total Budget	\$1,750	\$1,750
Incentives	\$600	\$600
Removal Costs	\$1,000	\$1,000
Administrative Costs	\$150	\$150
Administration as a % of Total Budget	8.6%	8.6%

REFRIGERATOR REPLACEMENT PROGRAM

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ENERGY SAVINGS AND BUDGET

16. The table below shows the Demand and Energy savings projected in 2011 and 2012 for the proposed Refrigerator Replacement Program.

	2011	2012
Number of Appliances Recycled	15	15
Peak Demand Savings (kW)	2.30	2.30
Energy Savings (kWh)	15,915	15,915

17. The table below shows the budget for 2011 and 2012 for the proposed Refrigerator Replacement Program.

Category	2011	2012
Total Budget	\$16,500	\$16,500
Incentives	\$15,000	\$15,000
Administrative Costs	\$1,500	\$1,500
Administration as a % of Total Budget	9.1%	9.1%

EDUCATION AND OUTREACH PROGRAM

18. Morenci would provide materials such as bill inserts that would help communicate the benefits of Energy Efficiency. These materials would include steps customers can take to help reduce their energy bills through energy efficiency. In addition, Morenci would provide information on the other energy efficiency programs that would be available to eligible customers.

19. Further, Morenci would provide energy efficiency education for the schools within its service area that would show the importance and value of energy conservation. Morenci would provide energy conservation booklets and study guides for students. No energy savings have been estimated for this program; therefore, Staff did not conduct a cost-benefit analysis of this program. The program budget for 2011 is \$1,050, and the budget for 2012 is also \$1,050.

SAFFORD SULFURIC ACID PLANT

20. Morenci states that FMI is constructing a Sulfuric Acid Plant ("SAP") at the FMI Safford mine site. The plant will use steam generated from heating sulfur to produce up to 17 MW of electric generation, of which 12 MW of capacity will be available for mining operations and 5 MW will be used for the SAP operations. At start-up, the SAP will require 4 MW of capacity but will be self-powering thereafter and will not rely on electricity generated from conventional sources. The SAP could produce an estimated 98,608,000 kWh of excess power annually.

21. The SAP will convert mined sulfur into sulfuric acid. The sulfur feeds into a furnace which is then oxidized to produce sulfur dioxide. The sulfur dioxide is then transported into a waste heat boiler where it combines with steam and becomes saturated. The saturated steam

1 is transported to a super-heater where it runs the turbine generator that produces electricity. The
2 sulfur dioxide gas then travels through a converter, producing sulfuric acid. The sulfuric acid will
3 then be used for mining operations.

4 22. Because the SAP will utilize process heating to produce electricity and requires no
5 additional power from conventional sources besides the power used for start-up, Morenci believes
6 that the SAP qualifies as combined heat and power facility as defined by A.A.C. R14-2-2401.4.
7 Morenci states that it included information regarding the SAP to illustrate the steps FMI is
8 currently taking to maximize efficient use of energy and lessen its dependence on conventional
9 sources of power and that FMI will continue to seek energy efficient measures for its mining
10 operations. Morenci states that no ratepayer funds will be used toward the construction, operation,
11 and maintenance of the SAP.

12 **MARKETING AND PROMOTION**

13 23. Morenci indicates that in order to promote each proposed program, it would
14 advertise in the local newspaper as well as on local radio regarding the benefits of each program
15 and energy efficiency in general. The advertisements will inform customers of the benefits of
16 CFLs and the cost of operating a second or older less efficient refrigerator or freezer. In addition,
17 Morenci would provide material informing customers about the benefits of recycling an old or
18 second refrigerator or freezer.

19 **COST-BENEFIT ANALYSIS**

20 24. The Commission's A.A.C. R14-2-2412.B requires the Societal Test be used for
21 determining the cost-effectiveness of a DSM program. Under the Societal Test, in order to be
22 cost-effective, the ratio of benefits to costs must be greater than one. That is, the incremental
23 benefits to society of a program must exceed the incremental costs of having the program in place.
24 The societal costs for a DSM program include the cost of the measure and the cost of
25 implementing the program, excluding rebates. The societal benefits of a DSM program include the
26 avoided demand and energy costs.

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25. Staff's cost-benefit analysis has concluded that Morenci's proposed CFL Program and the proposed Appliance Recycling Program are cost-effective. However, Staff's analysis shows that Morenci's proposed Refrigerator Replacement Program is not cost-effective.

26. The table below represents the benefit/cost ratio for each of the proposed programs.

Program	Benefit/Cost Ratio
CFL Program	2.64
Appliance Recycling Program	2.28
Refrigerator Replacement Program	0.78
Education and Outreach Program	N/A

27. The table below shows the total projected environmental benefits from the proposed 2011-2012 EE Plan.

Environmental Savings		
Water (utility savings)	87,605	Gallons
SO _x	1.23	Lbs
NO _x	23.37	Lbs

MEASUREMENT AND EVALUATION

28. In order to ensure that the programs included in its 2011-2012 EE Plan are meeting the projected goals and objectives, Morenci would collect data to track the performance of each program. This data would include;

- The number and type of CFLs purchased through the CFL Program and provided to participating retailers
- The number and type of CFLs purchased by customers from participating retailers
- The number of refrigerators and freezers recycled through the Appliance Recycling Program
- Specifications of the refrigerators and freezers being recycled through the Appliance Recycling Program
- The number of refrigerators replaced through the Refrigerator Replacement Program
- Specifications of the refrigerators replaced (if feasible) and the specifications of the replacement refrigerators

29. In addition, Morenci would use the above information to track the demand and energy savings realized for each program (excluding the Outreach and Education Program).

1 Morenci would also track the environmental savings including reduced emissions and water
2 savings.

3 **ENERGY EFFICIENCY ADJUSTOR SURCHARGE**

4 30. In its application, Morenci included its proposed surcharge rate in order to recover
5 the costs associated with its proposed 2011-2012 EE Plan. In addition, Morenci is proposing to
6 roll-over any funds not used in 2011 into subsequent years. Although Morenci is requesting to
7 exclude the FMI Morenci and FMI Safford mine sites from the standards specified in the EE
8 Rules, Morenci is proposing to assess each mine site a flat monthly charge. Morenci's residential
9 and non-residential customers would be assessed a monthly per-kWh surcharge.

10 31. Morenci is proposing a \$0.000245 per kWh monthly surcharge for its residential
11 and non-residential customers. In addition, Morenci is proposing a monthly rate of \$650 for the
12 FMI Morenci and FMI Safford mine sites. Morenci states that the per-kWh surcharge collected
13 from its residential and non-residential customers combined with the flat monthly charge from the
14 two mine sites would recover the costs of the proposed 2011-2012 EE Plan.

15 32. The table below shows the total proposed budget for 2011 and 2012.

Program	2011 Budget	2012 Budget
CFL Program	\$3,700	\$3,800
Appliance Recycling Program	\$1,750	\$1,750
Refrigerator Replacement Program	\$16,500	\$16,500
Education and Outreach	\$1,050	\$1,050
Total	\$23,000	\$23,100

19
20 33. In its application, Morenci estimates that it would collect approximately \$23,132
21 annually from its customers for the 2011-2012 EE Plan. The table below shows the monthly and
22 annual impact per customer and customer class including the total estimated to be collected per
23 month and per year.

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Customer Class	Number of Customers	Proposed Per kWh Surcharge*	Avg Monthly kWh Per Customer	Avg Monthly Charge per Customer	Estimated Collected (Monthly)**	Annual Charge per Customer	Estimated Collected (Annual) **
Residential	2,104	\$0.000245	595	\$0.15	\$315.60	\$1.80	\$3,787.20
Non-Residential	269	\$0.000245	4,723	\$1.16	\$312.04	\$13.92	\$3,744.48
FMI Morenci & Safford Mine s	2	N/A	N/A	\$650	\$1,300	\$7,800	\$15,600
Total	2,375	N/A	N/A	N/A	\$1,927.64	\$7,815.72	\$23,131.68

*The FMI Morenci and FMI Safford mine sites will be assessed a monthly charge rather than a per kWh surcharge.

**Per customer class.

34. Staff has analyzed Morenci's application in terms of whether there are fair value implications. In Decision No. 54712, issued on October 10, 1985, the Commission determined the fair value of Morenci's (Electric Division) property to be \$876,811. Although Staff considered this information, the proposed 2011-2012 EE Plan would have no significant impact on Morenci's revenue, fair value rate base, or rate of return, because this charge is cost-based and relatively limited in scope.

PARTIAL WAIVER REQUEST

35. In its application, Morenci is requesting a waiver to exclude energy sales to FMI Morenci and FMI Safford from the calculation of the Energy Efficiency Standard ("EE Standard") required in A.A.C. R14-2-2404. FMI Morenci and FMI Safford are industrial customers involved in mining. Morenci states that more than 98 percent of its load is from the energy sales for the mining operations at FMI Morenci and FMI Safford. In addition, Morenci states that it would not be able to meet the EE Standard if the energy sales to FMI Morenci and FMI Safford were to be included in the calculations.

36. Further, Morenci is requesting a waiver to exclude the non-mining load energy sales from the EE Standard. Morenci states that there is little growth in its service territory and that new programs that are geared toward new home construction are not viable in its service territory. A majority of Morenci's customers use evaporative cooling and do not have swimming pools. Therefore, programs for Heating, Ventilation, and Air Conditioning ("HVAC") units or pool pumps would be impractical in Morenci's service territory. In addition, the majority of

1 Morenci's customers have natural gas space heating and water heating. All of Morenci's service
2 area receives natural gas service from Southwest Gas Corporation.

3 37. Because of its unique customer base and the lack of opportunity to offer practical
4 and cost-effective programs, Morenci states that it would most likely not meet the EE Standard. It
5 is unlikely that the portfolio of proposed programs would result in enough reduced consumption to
6 meet the EE Standard. Staff notes that the EE Rules apply to each affected utility classified as
7 Class A according to A.A.C. R14-2-103(A)(3)(q) and without including the energy sales to the
8 FMI Morenci and FMI Safford mines, Morenci would not be considered a Class A utility under
9 A.A.C. R14-2-103(A)(3)(q) and therefore would not be subject to the requirements of A.A.C. R14-
10 2-2404.

11 38. Finally, Morenci is requesting a waiver from providing information required in
12 A.A.C. R14-2-2407 and A.A.C. R14-2-2409. Morenci states that its small administrative staff has
13 limited resources and lacks the personnel with the expertise necessary to provide the technical
14 analysis required by A.A.C. R14-2-2407 and A.A.C. R14-2-2409. In order to provide the
15 necessary information Morenci would need to expend significant expense to retain consultants
16 qualified to perform such analyses.

17 39. Morenci has been granted approval of a similar waiver request in its 2011
18 Renewable Energy Standard and Tariff ("REST") Plan (Decision No. 72230). The Commission
19 granted a partial waiver of A.A.C. R14-2-1804 and A.A.C. R14-2-1805 which allowed Morenci to
20 exclude the FMI Morenci and FMI Safford mine sites from the calculation of the REST
21 requirement. In addition, the Commission has previously granted Morenci's request for a partial
22 waiver of the REST requirement in prior Decisions (Decision Nos. 70303, 70952, and 71469).

23 **STAFF ANALYSIS AND RECOMMENDATIONS**

24 40. Staff believes that Morenci's proposed 2011-2012 EE Plan will help promote
25 energy efficiency within in its service area. As stated above, Staff has found that Morenci's
26 proposed CFL Program and proposed Appliance Recycling Program to be cost effective. Based on
27 Staff's analysis, Morenci's proposed Refrigerator Replacement Program is not cost effective.
28 Therefore, Staff has recommended that the Refrigerator Recycling Program not be approved

1 because it is not cost effective. However, Staff has recommended approval of Morenci's proposed
2 CFL Program and Appliance Recycling Program.

3 41. Staff has recommended that the budget for the proposed Refrigerator Replacement
4 Program be incorporated into the budget for the CFL Program. The total budget for the 2011-2012
5 EE Plan would remain unchanged. In addition, Staff has recommended that the CFL Program be
6 modified to include a CFL giveaway component similar to the APS Consumer Products Program
7 approved in Decision No. 72032 as part of the APS 2011 Demand-Side Management
8 Implementation Plan.

9 42. Staff has recommended that Morenci distribute giveaway CFLs through events,
10 such as fairs, home shows, festivals, community events and trade shows in its service area. In
11 addition, Staff has recommended that Morenci distribute giveaway CFLs through local charitable
12 organizations and community groups. Further, Staff has recommended that Morenci develop
13 guidelines for participating charitable organizations and community groups to adhere to in order to
14 effectively distribute the giveaway CFLs and track the progress of the giveaway component of the
15 CFL Program.

16 43. Staff believes that Morenci should review the guidelines required by APS'
17 Consumer Products Program (Decision No. 72032) and modify them as necessary to accommodate
18 Morenci's service area and customer base. Because of Morenci's unique customer mix and the
19 size of its customer base, Staff believes that an enhanced CFL Program would provide greater
20 opportunity for more of its customers to participate in energy efficiency in a cost-effective manner.
21 The Enhanced CFL Program would continue to be cost-effective.

22 44. The table below represents Staff's proposed modified total budget which removes
23 the Refrigerator Replacement Program and incorporates its proposed budget of \$16,500 into the
24 budget for the CFL Program.

Program	2011 Budget	2012 Budget
CFL Program	\$20,200	\$20,300
Appliance Recycling Program	\$1,750	\$1,750
Education and Outreach	\$1,050	\$1,050
Total	\$23,000	\$23,100

1 45. Staff notes that increased federal standards for efficiency are being phased in
2 beginning in 2012. The Energy Independence and Security Act ("EISA") of 2007 created a
3 standard that requires light bulbs to use 30 percent less energy than current standard bulbs. The
4 standard increases for 100 watt bulbs in 2012, 75 watt bulbs in 2013, and 40 watt bulbs and 60
5 watt bulbs in 2014.

6 46. By 2020, under EISA, all bulbs will have to be at least 70 percent more efficient.
7 As the new standards begin to be phased in, the baseline for measuring must also shift. Therefore,
8 cost-effectiveness of lighting programs will need to be re-evaluated to measure the savings against
9 the baseline.

10 47. The increased federal standards will not eliminate the need for CFL programs in the
11 near term. However, the higher standards will raise the baseline for more common wattage bulbs.
12 In future years, it may be necessary for Morenci to re-evaluate its CFL Program, taking into
13 account federal standards, in order to avoid overstatement of the energy savings and cost-
14 effectiveness. Although CFLs have attained an increasing share of the lighting market, they have
15 not become the standard, particularly in the Residential sector. Energy efficiency lighting
16 measures including CFLs continue to have considerable potential for providing energy savings.

17 48. Staff has recommended that Morenci be granted a waiver to exclude energy sales to
18 FMI Morenci and FMI Safford from the calculation of the EE Standard required in A.A.C. R14-2-
19 2404. In addition, Staff has recommended that Morenci be granted a waiver of the EE Standard
20 included in A.A.C. R14-2-2404 for the non-mining energy sales. Staff understands that due to its
21 unique circumstances, it is unlikely that Morenci will meet the required EE Standard. Therefore,
22 Staff has recommended that with the 2011-2012 EE Plan, Morenci be considered in compliance
23 with the EE Standard.

24 49. In addition, because Morenci has no prior experience with energy efficiency
25 programs and due to the timing of approval of the proposed plan, Staff has recommended that
26 Morenci should implement its EE Plan for the 2012-2013 calendar years. Therefore, Morenci
27 would be required to file its next EE Plan no later than June 1, 2014 pursuant to A.A.C R14-2-
28 2405(A). In addition, Staff has recommended that Morenci's initial filing of A.A.C. R14-2-2409

1 be filed no later than March 1, 2013. Further, Staff has recommended that for subsequent filings,
2 Morenci comply with all of the filings dates specified in the EE Rules.

3 50. Staff has recommended Morenci's request for a waiver in providing the information
4 required in A.A.C. R14-2-2407 and A.A.C. R14-2-2409 not be approved. Staff believes that in
5 order to effectively and accurately evaluate the progress of the proposed programs and any future
6 programs approved by the Commission, the information required in A.A.C. R14-2-2407 and
7 A.A.C. R14-2-2409 needs to be filed. Further, Staff has recommended that Morenci be required to
8 file with Docket Control, as a compliance matter in this case, a tariff consistent with the terms of
9 the Commission's Decision within 15 days of the effective date of this Decision.

10 CONCLUSIONS OF LAW

11 1. Morenci Water & Electric Company is an Arizona public service corporation within
12 the meaning of Article XV, Section 2, of the Arizona Constitution.

13 2. The Commission has jurisdiction over Morenci and over the subject matter of the
14 Application.

15 3. The Commission, having reviewed the application and Staff's Memorandum dated
16 August 2, 2011, concludes that it is in the public interest to approve Morenci Water & Electric
17 Company's proposed 2011-2012 Energy Efficiency Implementation Plan with the modifications
18 described herein.

19 ORDER

20 IT IS THEREFORE ORDERED that Morenci Water & Electric Company's proposed
21 2011-2012 Energy Efficiency Implementation Plan be adopted as modified by this order.

22 IT IS FURTHER ORDERED that the proposed Appliance Recycling Program is approved.

23 IT IS FURTHER ORDERED that the proposed CFL Program is approved, as modified
24 herein.

25 IT IS FURTHER ORDERED that Morenci Water & Electric Company's proposed
26 Refrigerator Replacement Program shall not be approved.

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1 IT IS FURTHER ORDERED that the \$16,500 budget for the Refrigerator Replacement
2 Program be incorporated into the budget for the CFL Program for a total budget of \$20,300 for the
3 CFL Program.

4 IT IS FURTHER ORDERED that Morenci Water & Electric Company's request for waiver
5 to exclude the energy sales to the FMI Morenci and FMI Safford mine sites from the calculation of
6 the Energy Efficiency Standard required in A.A.C. R14-2-2404 is granted through 2013.

7 IT IS FURTHER ORDERED that Morenci Water & Electric Company's request for waiver
8 of the Energy Efficiency Standard for non-mining load is granted to the extent necessary to
9 recognize the proposed 2011-2012 Energy Efficiency Implementation Plan, as modified by this
10 order, as being in compliance with the Energy Efficiency Standard requirement in A.A.C. R14-2-
11 2404.

12 IT IS FURTHER ORDERED that Morenci Water & Electric Company's proposed 2011-
13 2012 Energy Efficiency Implementation Plan, as modified by this order, be implemented for the
14 2012-2013 calendar years.

15 IT IS FURTHER ORDERED that Morenci Water & Electric Company file its next Energy
16 Efficiency Implementation Plan no later than June 1, 2014 pursuant to A.A.C. R14-2-2405(A).

17 IT IS FURTHER ORDERED that Morenci Water & Electric Company's initial filing
18 pursuant to A.A.C. R14-2-2409 be filed no later than March 1, 2013.

19 IT IS FURTHER ORDERED that all subsequent filings pursuant to A.A.C. R14-2-2401
20 through A.A.C. R14-2-2419 be filed on the dates specified in the Rules.

21 IT IS FURTHER ORDERED that Morenci Water & Electric Company's request for a
22 waiver in providing the information required in A.A.C. R14-2-2407 is denied.

23 IT IS FURTHER ORDERED that Morenci Water & Electric Company's request for a
24 waiver in providing the information required in A.A.C. R14-2-2409 is denied.

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1 IT IS FURTHER ORDERED that Morenci Water & Electric Company file with Docket
2 Control, as a compliance matter in this case, a tariff consistent with the terms of the Commission's
3 Decision within 15 days of the effective date of this Decision.

4 IT IS FURTHER ORDERED that this Order shall become effective immediately.

5

6 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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CHAIRMAN

COMMISSIONER

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COMMISSIONER

COMMISSIONER

COMMISSIONER

13

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IN WITNESS WHEREOF, I, ERNEST G. JOHNSON,
Executive Director of the Arizona Corporation Commission,
have hereunto, set my hand and caused the official seal of
this Commission to be affixed at the Capitol, in the City of
Phoenix, this _____ day of _____, 2011.

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ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

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DISSENT: _____

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DISSENT: _____

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1 SERVICE LIST FOR: Morenci Water & Electric Company
2 DOCKET NO.: E-01049A-11-0054

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